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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/334,163	06/16/1999	BRUCE NAGEL	MPS-411XC1	5018

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EXAMINER

COLLINS, CYNTHIA E

ART UNIT	PAPER NUMBER
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1638

DATE MAILED: 11/04/2002

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/334,163

Applicant(s)

NAGEL, BRUCE

Examiner

Cynthia Collins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 16 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 16 and 18-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

The Amendment filed July 17, 2002, paper no.16, has been entered.

Claims 1, 4, 5, 6, 10, 11 and 16 are newly amended.

Claims 18-22 are newly added.

Claims 1-11, 16 and 18-22 are pending.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

Claims 1-11, 16 and 18-22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are drawn to corn line LS0417 (ATCC Accession No. PTA-1397), LS1498 (ATCC Accession No. PTA-1396), LS288 (ATCC Accession No. PTA-3642) and sublines produced therefrom, wherein the seeds of said lines and sublines have a mean saturate content of less than about 7.0%, a mean oleic acid content of at least 64.9%, and a mean linoleic acid content of 27.4% or less.

The claimed invention lacks written description under current written description guidelines. The claims are drawn to sublines of plant lines having limited identifying characteristics, whereby only one parent of the parental line is disclosed. While the specification does not define subline, one would expect a subline to be an inbred line that has been repeatedly

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selfed such that it is stable with respect to its genotype. The specification discloses only one subline having the claimed fatty acid content, LS1498-18.S01.S08 (page 8 Table 1), and hence it is unclear if said parental line is a stable inbred. However, given that only one parent of the parental line LS1498-18 is disclosed, it is unclear whether this subline or any subline obtained from the parental lines is genotypically stable, especially with respect to the seed saturate content, the seed oleic acid content, and the seed linoleic acid content. Furthermore, the only identifying characteristics set forth for the sublines are the seed saturate content, the seed oleic acid content, and the seed linoleic acid content. No other identifying characteristics of the claimed sublines are described. Given that only one parent of the parental line is disclosed, the characteristics of all possible sublines derived from said parental line as broadly claimed are not described in the instant specification. If the claimed sublines cannot be identified by characteristics clearly disclosed in the specification, then it would be impossible to determine whether or not a plant of unknown parentage is covered by the claims. Moreover, given that Applicant has not described all sublines as broadly claimed, all sublines are not considered to be possessed by Applicant. Breeding techniques can result in genotypically and phenotypically different plants wherein the identifying characteristics for the resultant offspring are highly variable. In view of the fact that only one parent of the parental line is disclosed, and in view of the fact that limited characteristics for the sublines are disclosed in the specification or set forth in the claims, there is a lack of written description for the claimed sublines, and in view of the level of knowledge and skill in the art, one skilled in the art would not recognize from the disclosure that the applicant was in possession of the claimed sublines (see Written Description Guidelines, Federal Register, Vol. 66, No. 4, January 5, 2001, pages 1099-1111).

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Claims 1-11, 16 and 18-22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant's arguments filed July 17, 2002, have been fully considered but they are not persuasive.

Applicant argues that the 35 U.S.C. 112, first paragraph rejection set forth at page 2 of the office action mailed March 12, 2002, has been obviated by the amendment of claims 1, 6 and 16, incorporating the three deposited lines as indicated by the Examiner as enabled. Applicant also argues that the 35 U.S.C. 112, first paragraph rejection set forth at page 4 of the office action mailed March 12, 2002, has been obviated by the amendment to the claims (reply page 5).

The claims are drawn to corn line LS0417 (ATCC Accession No. PTA-1397), LS1498 (ATCC Accession No. PTA-1396), LS288 (ATCC Accession No. PTA-3642) and sublines produced therefrom, wherein the seeds of said lines and sublines have a mean saturate content of less than about 7.0%, a mean oleic acid content of at least 64.9%, and a mean linoleic acid content of 27.4% or less.

The specification discloses three corn lines whose seeds have a mean saturate content of less than about 7.0%, a mean oleic acid content of at least 64.9%, and a mean linoleic acid content of 27.4% or less, lines LS1498-18, LS288-04 and L0417-12. These lines were made by EMS mutagenesis of the pollen of F2 plants derived from a cross of two high oleic corn lines from the source population "Holeisyn", followed by pollination of a parental line of undisclosed identity to produce an F1 mutant generation (pages 5-6 and page 9 Table 2). The deposited lines

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do not appear to be enabling because the deposited seeds are not a homogenous, genotypically stable population. Even assuming that the undisclosed parental line used to produce the F1 mutant generation was identical to the line that was the source of the EMS mutagenized pollen, at best only three generations of selfing were used to produce the plants that are the source of the deposited seed. Three generations of selfing is not sufficient to produce a homogenous, genotypically stable inbred plant population whose seed would predictably exhibit the claimed fatty acid content. For example, Lee teaches that although the number of generations of selfing used to produce an inbred maize line will vary, in temperate climates maize breeders usually release inbred lines after seven or more generations of self-pollination and selection (Lee, *The Maize Handbook*, M. Freeling, V. Walbot, eds., 1994, Springer-Verlag, New York, page 424 first paragraph). Since the genotypic and phenotypic characteristics of the claimed lines and sublines are unstable, enablement of the claimed lines and sublines cannot be perfected with a deposit, since it is not clear that a deposit would provide a representative sample of the disclosed line that would repeatedly yield genotypically and phenotypically identical plants.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claims 8 and 9 are indefinite in the recitation of "hybrid". It is unclear how a corn plant of claim 6 can be a hybrid, as the corn lines of claim 6 were not produced by outcrossing (page 5 line 25 to page 6 line 15).

Claims 7 and 9 are indefinite in the recitation of "waxy". It is unclear how a corn plant of claim 6 can exhibit a waxy phenotype, as the specification indicates that the corn lines of claim 6 do not exhibit a waxy phenotype (page 10 lines 18-20).

Remarks

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (703) 605-1210. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on (703) 306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

CC
October 31, 2002



**AMY J. NELSON, PH.D
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